

TIRES OF WRONG SIZE CAUSE EXTRA EXPENSE

Company to Establish Technical Service Department for Benefit of Truck Owners.

Wrong type or wrong size of tires are used by many truck owners, causing great expense and trouble, according to truck tire experts of the United States Tire Company. In the interest of tire economy, the company has established a technical service department, made up of tire engineers who will give advice to any on engaged in truck operation. A

full statement of any tire problem from any truck operator will bring a detailed reply from the service department, giving the latest scientific information on the points involved. "We intend that the technical service department shall be used freely by every person who owns a truck," says C. K. Whidden, manager of truck tire sales of the United States Tire Company. "Whether an owner is a patron or not makes no difference, all our facilities for correct information are at his disposal. "If some large user has a number of hard knots for solution, we will be glad to have an experienced engineer visit him for several days if necessary, in order that his problems may be satisfactorily solved. "Nearly half of the trucks of the country are operating on the wrong kind of tires. This is a condition we hope to correct."

How to Grind Valve.

In cases where a badly pitted valve requires grinding, here is a short cut: Cut a piece of emery-cloth in dimensions a little bit wider than the valve seating and twice as long, and then double it over so that both surfaces are cutting surfaces. Next cut a hole in the cloth so that the valve stem may be passed through and the emery-cloth brought close up against the valve head. The valve is then placed in position for grinding under comparatively high pressure. Both sides of the emery-cloth will conform to the valve head and the seating, and if the valve turns and the emery-cloth remains stationary the valve will be ground on the upper emery, whereas if the cloth revolves, the valve seating will be ground on the lower emery.

QUESTIONS AND ANSWERS FOR THE AUTOMOBILISTS

Answers to Last Week's Questions.

1. Should your car stall while going up a hill it requires quick action to hold the car from going down hill backward and to again bring it in motion to cover the remainder of the hill. Immediately the car comes to a stop pull back the emergency brake lever. Do this before anything else is attempted, to hold the car on the hill. Then place the gears in neutral and start the engine. Keeping the emergency, disengage the clutch, mesh the low speed gears, advance the hand throttle lever to speed up the engine, then let up the clutch pedal until the clutch begins to take hold. With the engine starting to pull the car, release the emergency brakes and slowly let the clutch pedal in the full distance. The car will then be going forward in low gear. If a shift from low to second gear is desired, retard fully the throttle lever, disengage clutch and shift gears to second, speeding up the engine with foot accelerator while re-engaging clutch. Manipulation of clutch pedal and gearshift lever must be done quickly, to prevent the car from coming to a standstill when clutch is not engaged. Because of increased load when the car is going up hill, care must be taken that the clutch is not engaged too quickly, also that the engine is speeded up sufficiently to receive the load when clutch is engaged, to prevent stalling.

2. Early spark and late spark are merely terms to designate how the spark is timed by manipulation of the spark control lever, early spark meaning spark occurring a trifle before the beginning of power stroke of each piston, caused by advancing the spark lever, and late spark meaning spark occurring at the beginning or a trifle after beginning of power stroke and caused by retarding the spark lever.

3. Spark advanced too far for the rate of speed at which the engine is running causes knocking of the engine and connecting rods to break. It also will cause overheating of the engine.

4. If an engine with magneto ignition continues to run after the ignition is switched off, the trouble lies in the magneto ground wire, which may be disconnected, loose or broken. Sometimes a break in the wire may be unnoticed because the insulation around the wire may be damaged.

5. There are 10,922,278 automobiles in the world, according to late registration figures, and of this number 83 per cent are in the United States.

6. Many cars which have given considerable mileage run good at average or high rates of speed when the engine is pulling steadily, but as soon as the throttle is closed and the car speed dies the car runs jerky. This is usually caused by looseness due to wear in the universal joints, the rear axle unit and the transmission. Play between gear teeth will cause a back-and-forth movement of the gears at slow speed or when the car is coasting. Play in bearings of these units also will be noticed, and wear in the universal joints will not only affect the running of the car, but also will cause rattling.

7. A scraping sound in a rear wheel could be caused by sand working in between brake band and drum, or, more commonly, by either inner or outer brake band or parts which operate them being in contact with the brake drum.

8. To obtain smooth running without misfiring in an engine at low speed, the spark must be set so that the cylinders will not fire too soon at retarded spark, the high-tension spark coil must be free from short-circuits, the battery must be in good condition and well charged; contact points in timer must be clean, flat and adjusted to the correct spacing; distributor points should be clean and not worn; carburetor should be carefully adjusted when the engine is warm and there should be good compression in all cylinders; well seating valves being the most important to good compression. It also is necessary to use good spark plugs with points the proper distance apart. Air

leaks at cylinder-head gasket, spark plug valve caps and carburetor manifold where it connects to cylinder block will cause missing at low speed.

9. If a car should suddenly drive across the path of your car, or if a car ahead should turn to the left just as you were starting to pass it, turn your car quickly in the same direction taken by the other car, at the same time slowing your car's speed. If an attempt were made to bring your car to a stop without turning the probability is that you would not stop in time to avoid collision.

10. The majority of automobiles are owned by farmers and people living in small towns. In these towns—of 1,000 or less people—there are 23 per cent of the country's registered cars. In large cities of 500,000 population or more the cars average only about 9 per cent of the total number.

This Week's Questions.

1. How can you tell when your engine is losing compression?
2. If a car caught fire, how could the flames be extinguished?
3. What could cause uneven running of the rear wheels of a car?
4. What should be done if, on ascending a hill, a car should suddenly cross the path of your car?
5. Frequently, the rear tires of a car wear unevenly. What are the two main causes of this?
6. How many automobiles are there in the United States, and what state leads with the largest ratio of cars to population?
7. What could cause noise in the transmission?
8. Does the sudden grabbing of a clutch, causing the car to jerk forward even when the clutch pedal is let in slowly, indicate that the clutch is adjusted too tightly?
9. To what level does the gasoline ascend in the float chamber of a carburetor?
10. What two parts or units of the automobile should be examined most frequently?

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Rounding Sharp Corners.

While it is a wise precaution to throw out the clutch when rounding a sharp corner, it also has a beneficial effect upon the tires. Whenever the car tends to skid, due to its deflection from a straight course, a cross strain is brought to bear on the tire treads, which is directly proportional to the weight of the vehicle and the radius of the curve and proportional to the square of its velocity. If the power is applied in rounding a curve the tendency to rip off the tires is further aggravated by the backward drag, due to traction. If the clutch is released, however, that factor is eliminated and the strain is thereby reduced.

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